



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,231	11/20/2003	Kaoru Kumagai	1715317	9918
24240	7590	09/23/2004	EXAMINER	
CHAPMAN AND CUTLER 111 WEST MONROE STREET CHICAGO, IL 60603				SMITH, RICHARD A
		ART UNIT		PAPER NUMBER
		2859		

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,231	KUMAGAI ET AL. <i>(initials)</i>	
	Examiner	Art Unit	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 is/are rejected.
- 7) Claim(s) 6 and 7 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 - 1.) Certified copies of the priority documents have been received.
 - 2.) Certified copies of the priority documents have been received in Application No. _____.
 - 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to because of the following informalities. Appropriate correction is required.

a. Throughout the specification including the claims, the applicant has consistently applied a grammatical and idiomatic error, all involving the use of the word "existed." For example, the use of "is not existed" used throughout the specification should be --does not exist-- or -- is non-existent-- and "existed" should generally be --exists-- and "is existed" should generally be "does exist" or --exists--. For examples please see lines 7-16 on page 12.

b. Furthermore, "filed" in line 10 on page 12 should be --field--.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,313,409 to Wiklund et al.

Wiklund et al. discloses an automatic tracking apparatus for a reflector comprising a surveying machine body (1); an illumination portion disposed in said surveying machine body for illuminating a measurement light toward a reflector (9); a light receiving portion which is disposed in said surveying machine body and which has an image sensor for receiving a reflection light image of the measurement light illuminated toward said reflector (7); arithmetic means for calculating a position of the reflection light image from said reflector in an area of said image sensor (12); and a rotation mechanism for rotating said surveying machine body so as to position said reflector on a light receiving optical axis of said light receiving portion based on the position obtained by said arithmetic means, wherein a light receiving area which is a smaller area than the area of the image sensor area and has said light receiving optical axis as a center is provided in the area of said image sensor (when 32c of figure 5 is not activated, column 6, lines 21-43), the area of said light receiving area is changed in accordance with a distance from said reflector to the surveying machine body (column 5, line 59 through column 7, line 42), said light receiving area comprises a first light receiving area (31a, 32a, 33a and 34a) and a second light receiving area (31b, 32b, 33b and 34b) which has a larger area than the first light receiving area and surrounds the first light receiving area.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiklund et al. Wiklund et al. teaches all that is claimed as discussed in the above rejections of claims 1-3 except for the limitations of claim 4.

With respect to claim 4, i.e., when a reflection light image of said reflector is not existed in said first light receiving area, the reflection light image of said reflector is detected in said second light receiving area, and when the reflection light image of said reflector is not existed in said second light receiving area, the reflection light image is detected in an area of the image sensor: Wiklund et al. discloses that the outer segments can be disconnected to improve the

signal to noise ratio (column 6, lines 21-56), therefore it appears to the examiner that it would have been obvious to one of ordinary skill in the art at the time of the invention to have the controller (12) activate the segments from inner to outer in order to reduce the signal to noise ratio, to obtain a faster lock and to avoid other reflections that would be noise.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiklund et al. as applied to claim 4 above, and further in view of U.S. 6,462,810 to Muraoka et al.

Wiklund et al. teaches all that is claimed as discussed in the above rejection of claim 4 except for a range of said second light receiving area is set within a range in which said surveying machine body is rotated in horizontal and vertical directions by said rotation mechanism within a scanning time for one field of said image sensor.

Muraoka et al. discloses that once the target is acquired then the range of the light receiving area is set within a range so that if the moving speed is beyond that of the visual field of the telescope then tracking will not be performed (column 1, lines 28-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to set the range of the second light receiving area, taught by Wiklund et al., to be within a scanning time for one field of said image sensor, as suggested by Muraoka et al., in order to prevent the telescope from following spurious signals.

Allowable Subject Matter

8. Claims 6 and 7 would be allowable if rewritten to overcome the claim objections (see the objection to the specification for "existed") set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

9. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

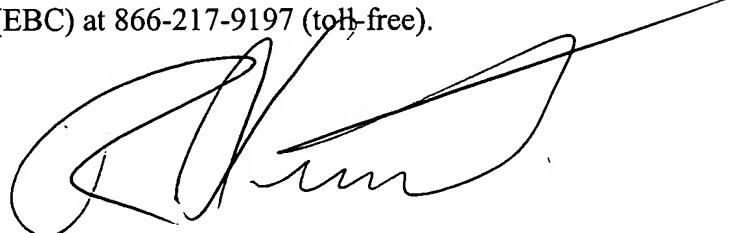
Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



R. Alexander Smith
Examiner
Technology Center 2800

RAS
September 20, 2004